

What is claimed is:

1. A method for forming nanosized metal particles comprising:
 - (i) dispersing a plurality of metal precipitates in a suitable solvent, each of said metal precipitates comprising at least one metal compound; and
 - (ii) adding to said solvent an effective amount of at least one peroxide to form a product consisting essentially of a plurality of nanosized metal particles in said solvent.
2. The method according to claim 1, wherein the ratio of metal precipitate to solvent is about 100mg metal contents to 0.010-3.0 liters solvent.
3. The method according to claim 1, wherein said metal is at least one noble metal.
4. The method according to claim 3, wherein said at least one noble metal is selected from the group consisting of Re, Ru, Rh, Pd, Ag, Os, Ir, Pt, Au and combinations thereof.
5. The method according to claim 1, wherein said solvent is selected from the group consisting of water, lower alkyl alcohols, lower alkyl substituted aromatics and combinations thereof.
6. The method according to claim 5, wherein said solvent a lower alkyl alcohol selected from the group consisting of methanol, ethanol, isopropanol and combinations thereof.
7. The method according to claim 5, wherein said alkyl substituted aromatic is toluene.
8. The method according to claim 1, wherein said metal precipitate is selected from the group consisting of metal oxalates, metal sulfides, metal sulfates, metal oxides, metal hydroxides, metal carbonates and combinations thereof.

9. The method according to claim 8, wherein said metal precipitate comprises at least one metal selected from the group consisting of Re, Ru, Rh, Pd, Ag, Os, Ir, Pt and Au.
10. The method according to claim 1, wherein said metal precipitate is formed by reacting a source of metal ions with a base.
11. The method according to claim 10, wherein said base is selected from the group consisting of oxalate, carbonate, acetate, nitrate, hydroxide and combinations thereof.
12. The method according to claim 10, wherein said source of metal ions is silver and said base carbonate or hydroxide.
13. The method according to claim 1, wherein said at least one metal compound is selected from the group consisting of silver carbonate and gold oxide.
14. The method according to claim 1, wherein said solvent contains no surfactant or at least one surfactant and/or wetting agent.
15. The method according to claim 1, further comprising bubbling an inert gas through said solvent.
16. The method according to claim 15, wherein said inert gas is argon or nitrogen.
17. The method according to claim 1, wherein the temperature of said solvent is above ambient temperature.
18. The method according to claim 17, wherein said temperature is 50°C to 100°C.
19. The method according to claim 1, further comprising separating said nanosized metal particles by centrifugation or filtration.

20. The method according to claim 1, wherein said at least one peroxide is hydrogen peroxide.
21. The method according to claim 1, further comprising sonicating said solvent and said plurality of metal precipitates prior to adding said at least one peroxide.
22. The method according to claim 1, wherein a first portion of said at least one peroxide is added to said solvent and subsequently at least a second portion of at least one peroxide is added to said solvent.
23. The method according to claim 1, wherein said at least one peroxide is added to said solvent in a single step.
24. The method according to claim 1, wherein said nanosized metal particles have an average particle diameter of 40 nm to 1,000 nm.
25. The method according to claim 1, wherein said nanosized metal particles have an average particle diameter of 100 nm to 1,000 nm.